Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A modular insulation blanket, comprising

a plurality of batting blocks and a cover having sealed perimeter edges, ~~and a plurality of modules, the cover comprising~~ a distal layer and a proximal layer, the layers being mated in sealed relationship along a lattice of longitudinal and latitudinal heat-sealed ~~seam~~ seams, the seams forming a plurality of modules between the layers, and ~~with~~ the batting blocks being disposed between said layers within the modules which are separated by the heat-sealed seams.

2. (Currently amended) An insulation blanket for thermal and/or acoustical insulation of a surface of a structure, comprising:

~~a modular insulation blanket comprising:~~

a plurality of batting blocks formed of woven insulating materials, non-woven insulating materials or combinations thereof; and

a cover having sealed perimeter edges, ~~and a plurality of modules, the cover comprising~~ a distal layer and a proximal layer, the layers each having perimeter edges and being formed of a flexible, thermoplastic film sheet mated in heat sealed relationship along a ~~plurality~~ lattice of longitudinal and latitudinal heat-sealed seams, the seams forming a plurality of modules between the layers, and the batting blocks being disposed between said layers within the modules which are separated by the plurality of heat-sealed seams~~, the layers being mated in sealed relationship at the perimeter edges~~.

3. (Original) The blanket of claim 1 or claim 2, further comprising a retention system comprised of a plurality of attachment means affixed to the proximal layer of the cover.

4. (Original) The blanket of claim 1 or claim 2, wherein each layer has an interior cover surface and an exterior cover surface, the blanket further comprising at least one

mechanical fastener joining each batting block to at least one interior cover surface of the module in which said batting block is disposed.

5. (Original) The blanket of claim 1 or claim 2, wherein each layer has an interior cover surface and an exterior cover surface and each of the plurality of batting blocks are attached to at least one interior cover surface of the module in which said batting block is disposed.

6. (Original) The blanket of claim 1 or claim 2, wherein at least one of the heat-sealed seams is perforated to provide a tear-line.

7. (Original) The blanket of claim 1 or claim 2, wherein at least one of the heat-sealed seams is a foldable seam.

8. (Original) The blanket of claim 1 or claim 2, wherein at least one of the heat-sealed seams is perforated to provide a tear-line and at least one of the heat-sealed seams is a foldable seam.

9. (Original) The blanket of claim 1 or claim 2, wherein the distal cover layer of the plurality of modules is perforated to allow the module to breath.

10. (Original) The blanket of claim 1 or claim 2, further comprising a breather in the distal cover layer of each of the plurality of modules.

11. (Original) The blanket of claim 1 or claim 2, further comprising a plurality of attachment means affixed to the exterior surface of the proximal cover layer.

12. (Original) The blanket of claim 1 or claim 2, further comprising a retention system selected from the group consisting of a mated mechanical attachment system, a peel-and-stick tape system, a hook-loop retention system, tape, combined hook and loop and peel and stick tape retention systems, self-adhering retention systems, adhesives, a plurality of mechanical fasteners, and combinations thereof.

13. (Original) The blanket of claim 1 or claim 2, wherein the cover has at least four sealed perimeter edges, the blanket further comprising an attachment means affixed to at least one of the sealed perimeter edges, said attachment means being selected from a group consisting of a mated mechanical attachment system, a peel-and-stick tape systems, a hook-loop retention system, tape, combined hook and loop and peel and stick tape retention systems, self-adhering retention systems, adhesives, a plurality of mechanical fasteners, and combinations thereof.

14. (Original) The blanket of claim 1 or claim 2, wherein the cover has at least two opposed sealed perimeter edges, the blanket further comprising an attachment means affixed to each of the at least two opposed sealed perimeter edges.

15. (Original) The blanket of claim 1, wherein the cover layers are formed of a thermoplastic film sheets.

16. (Original) The blanket of claim 15, wherein the thermoplastic film sheets are selected from the group consisting of synthetic polymers, copolymers, coextruded polymers, combinations thereof and laminated thereof.

17. (Original) The blanket of claim 2, wherein the thermoplastic film sheet is selected from the group consisting of synthetic polymers, copolymers, coextruded polymers, combinations thereof and laminated thereof.

18. (Original) The blanket of claim 1, wherein the cover layers are formed of a thermoplastic film sheet or film laminate selected from the group consisting of polyvinyl fluoride, polyimide, polyetheride, polyvinyl chloride, polyurethane, polypropylene, polyethylene terephthalate, and combinations thereof.

19. (Original) The blanket of claim 2, wherein the thermoplastic film sheet is selected from the group consisting of polyvinyl fluoride, polyimide, polyetheride, polyvinyl chloride, polyurethane, polypropylene, polyethylene terephthalate, and combinations thereof.

20. (Original) The blanket of claim 1 or claim 2, wherein each of the plurality of modules has interior dimensions defining a module area and the batting blocks are sized to substantially conform to the module area of the modules in which they are disposed.

21. (Original) The blanket of claim 1 or claim 2, wherein the insulating blanket is sized in standard dimensions that substantially conform with the dimensions of an insulation area of an aircraft fuselage.

22. (Original) The blanket of claim 1 or claim 2, further comprising a hook and loop retention system.

23. (Original) The blanket of claim 1 or claim 2, further comprising a plurality of noise dampers adhered to the proximal layer.

24. (Original) The blanket of claim 1 or claim 2 further comprising a plurality of noise dampers and a hook and loop retention system both adhered to the proximal layer.

25. (Currently amended) An insulated aircraft fuselage, comprising:

an aircraft fuselage, the fuselage having an interior skin surface and an exterior skin surface, the interior skin surface bearing a series of struts in spaced relationship; and

a modular insulation blanket ~~system comprising a plurality of modular insulation blankets~~, the insulation blanket ~~blankets each~~ being comprised of a plurality of batting blocks and a cover having sealed perimeter edges, ~~and a plurality of modules, the cover comprising~~ a distal layer and a proximal layer, the layers being mated in sealed relationship along a plurality of heat sealed seams, the seams forming a plurality of modules between the layers, and ~~with~~ the batting blocks being disposed between said layers within the modules which are separated by the heat-sealed seams[[,]];

wherein the insulation ~~blankets being~~ blanket is affixed to the interior skin surface of the fuselage such that at least one strut of the series of struts is sandwiched between adjacent modules of the plurality of modules, and a seam of the plurality of seams separating the adjacent modules extends across the strut ~~, the insulation blankets being adhered to the interior skin surface between the struts~~.

26. (Original) The insulated aircraft fuselage of claim 25, further comprising a retention system.

27. (Currently amended) The insulated aircraft fuselage of claim [[25]] 26, wherein the retention system is selected from the a group consisting of a mated mechanical attachment system, a peel-and-stick tape systems, a hook-loop retention system, tape, combined hook and loop and peel and stick tape retention systems, self-adhering retention systems, adhesives, a plurality of mechanical fasteners, and combinations thereof.

28. (Currently amended) The insulated aircraft fuselage of claim 25, wherein the insulation blankets are affixed in constant, conforming interface with the interior skin surface.

29. (Currently amended) The insulated aircraft fuselage of claim 25, wherein the distal cover layer of the plurality of modules is perforated to allow the modules to breath.

30. (Currently amended) The insulated aircraft fuselage of claim 25, further comprising a breather in the distal cover layer of each of the plurality of modules.

31. (Currently amended) The insulated aircraft fuselage of claim 25, further comprising a plurality of attachment means affixed to the exterior surface of the proximal cover layer.

32. (Withdrawn) A method of making a modularized insulation blanket, comprising the steps of:

providing a distal cover layer, the distal cover layer having a perimeter edge, an interior surface, an interior surface and a central region;

positioning a plurality of batting blocks on the central region of the interior surface of the distal cover layer in spaced relationship so as to provide a mating space between the batting blocks;

providing a proximal cover layer, the proximal cover layer having a perimeter edge, an exterior surface, an interior surface and a central region, the proximal cover layer being sized to provide sufficient material to form modules surrounding and encapsulating the batting blocks on all sides in conjunction with distal layer;

placing the proximal cover layer over the distal cover layer and the plurality of batting blocks positioned thereon with the portions of the layers at their perimeter edges and within the mating spaces between batting blocks overlapping and aligned in mating relationship;

applying heat and pressure to the cover layers along the perimeter edges and along the mating spaces between batting blocks to seal the perimeter edges and to form a plurality of heat sealed seams along the mating spaces, the heat sealed seams defining a plurality of modules with batting blocks disposed between the cover layers.

33.[[34.]] (Withdrawn) The method of claim 32, further comprising the step of perforating at least one of the heat sealed seams to provide a tearable heat sealed seam.

34.[[35.]] (Withdrawn) The method of claim 32, further comprising the steps of perforating at least one of the heat sealed seams to provide a tearable heat sealed seam and the distal cover layer and/or proximal cover layer to provide a breathing system in each of the plurality of modules.

35.[[36.]] (Withdrawn) The method of claim 32, wherein at least one heat sealed seam is a foldable seam.

36.[[37.]] (Withdrawn) The method of claim 32, wherein the mating space between at least one pair of adjacent batting blocks is sized to accommodate a foldable heat-sealed seam, the method further comprising the step of providing an odd number of creases to the heat sealed seam formed between the at least one pair of adjacent batting blocks to form the foldable heat-sealed seam, the odd number of creases being at least three creases.

37.[[38.]] (Withdrawn) An apparatus for forming insulation blankets, the apparatus comprising:

a platen sized and configured to receive a blanket assembly comprised of a distal layer, a proximal layer and a plurality of batting blocks disposed there between in spaced relationship with a plurality of spaces between batting blocks defining mating spaces in which the distal and proximal layers overlap;

at least one edge sealer; and

a plurality of heat seal rollers, the rollers being spaced apart a predetermined distance in alignment with the mating spaces.

38.[[39.]] (Withdrawn) The apparatus of claim 37 [[38]], wherein the heat seal rollers and portions of the platen are in alignment with the mating spaces and are configured to cooperate together to apply heat and pressure to portions of distal and proximal layers overlapping within the mating spaces to form heat-sealed seams.

39.[[40.]] (Withdrawn) The apparatus of claim 38 [[39]], wherein the heat seal rollers and portions of the platen in alignment therewith are configured with a plurality of perforation elements and a plurality of recessed dentitions that correspond to and receive the perforations elements.

40.[[41.]] (Withdrawn) The apparatus of claim 37 [[38]], wherein the heat seal rollers and the portions of the platen in alignment therewith are configured to form heat sealed seams selected from the group consisting of non-foldable heat sealed seams, foldable heat-sealed seam, perforated heat-sealed seams, perforated and foldable heat-seal seams.

41.[[42.]] (Withdrawn) An apparatus for forming insulation blankets, the apparatus comprising:

a platen sized and configured to receive a blanket assembly comprised of a distal layer, a proximal layer and a plurality of batting blocks disposed there between in spaced relationship with a plurality of spaces between batting blocks defining mating spaces;

at least one edge sealer; and

a heat seal mechanism.

42.[[43.]] (Withdrawn) The apparatus of claim 41 [[42]], wherein the heat seal mechanism comprises a lattice of interconnected heat sealing elements which intersect and are oriented longitudinally and latitudinally.

43.[[44.]] (Withdrawn) The apparatus of claim 42 [[43]], wherein the mating spaces have a width and the heat sealing elements have a width corresponding to the width of the mating spaces.

44.[[45.]] (Withdrawn) The apparatus of claim 42 [[43]], wherein the heating elements and portions of the platen in alignment with the mating spaces are configured to cooperate together to apply heat and pressure to portions of distal and proximal layers overlapping within the mating spaces to form heat-sealed seams.

45.[[46.]] (Withdrawn) The apparatus of claim 42 [[43]], wherein the heating elements and portions of the platen in alignment therewith are configured with plurality of perforation elements and a plurality of recessed dentitions that correspond to and receive the perforations elements.

46.[[47.]] (Withdrawn) The apparatus of claim 42 [[43]], wherein the heating elements are configured to form heat sealed seams selected from the group consisting of non-foldable heat sealed seams, foldable heat-sealed seam, perforated heat-sealed seams, perforated and foldable heat-seal seams.

47.[[48.]] (Withdrawn) The apparatus of claim 37 [[38]] or claim 41 [[42]], further comprising an actuating mechanism.

48.[[49.]] (Withdrawn) The apparatus of claim 37 [[38]] or claim 41 [[42]], further comprising an actuating mechanism, the actuating mechanism being comprised of components selected from the group consisting of drives, motors, temperature regulators, pressure regulators, time regulators, electronic controls for automated or semi-automated operation, connections to electric power sources, and combinations thereof; and temperature probes and/or pressure probes in electronic communication with the actuating mechanism.

49.[[50.]] (Currently amended) An insulated aircraft component, comprising:

an aircraft component having at least one surface; and

a modular insulation blanket system comprising a modular insulation blanket, the insulation blanket being comprised of a plurality of batting blocks and a cover having sealed perimeter edges, ~~and a plurality of modules, the cover comprising~~ a distal layer and a proximal layer, the layers being mated in sealed relationship along a lattice of longitudinal and latitudinal heat sealed seams, the seams forming a plurality of modules between the layers, ~~with~~ the batting blocks being disposed between said layers within the modules which are separated by heat-sealed seams, and the insulation ~~blankets~~ blanket being affixed to the surface of the aircraft component.

50.[[51.]] (Previously presented) The insulated aircraft component of claim 49 [[50]], wherein the insulation blanket is affixed to the surface of the component with a retention system selected from a group consisting of mated mechanical attachment systems, peel-and-stick tape retention systems, hook-and-loop retention systems, tape, combined hook-and-loop and peel-and-stick tape retention systems, self-adhering retention systems, adhesives, a plurality of mechanical fasteners, and combinations thereof.

51.[[52.]] (Currently amended) An insulated structural component, comprising:

a structural component having at least one surface; and

a modular insulation blanket system comprising a modular insulation blanket, the insulation blanket being comprised of a plurality of batting blocks formed of an insulating material and a cover having sealed perimeter edges, ~~and a plurality of modules, the cover comprising~~ a distal layer and a proximal layer, the layers being mated in sealed relationship along a lattice of longitudinal and latitudinal heat-sealed seams, the seams forming a plurality of modules between the layers, ~~with~~ the batting blocks being disposed between said layers within the modules which are separated by heat-sealed seams, and the insulation ~~blankets~~ blanket being affixed to at least one surface of the structural component.

52.[[53.]] (Previously presented) The insulated structural component of claim 51 [[52]], wherein the insulation blanket is affixed to the surface of the component with a retention system selected from a group consisting of mated mechanical attachment systems, peel-and-stick tape retention systems, hook-and-loop retention systems, tape, combined hook-and-loop and peel-and-stick tape retention systems, self-adhering retention systems, adhesives, a plurality of mechanical fasteners, and combinations thereof.

53.[[54.]] (Previously presented) The insulated structural component of claim 51 [[52]], wherein the insulating material is selected from the group consisting of woven materials, non-woven materials, fibrous insulation materials, mineral wool, fiberglass, and refractory ceramic fibers.

54.[[55.]] (New) A modular insulation blanket, comprising:

a plurality of batting blocks; and

a cover including sealed perimeter edges, a distal layer and a proximal layer, the layers being mated along a plurality of heat-sealed seams;

the plurality of seams forming a plurality of modules between the layers in which the batting blocks are disposed, the modules separated by the seams; and

at least one seam of the plurality of seams including an inner crease formed approximately mid-way between adjacent modules of the plurality of modules.

55.[[56.]] (New) The blanket of claim 54 [[55]], wherein the at least one seam further includes a pair of creases formed between the adjacent modules, a first crease of the pair formed on a first side of the inner crease and a second crease of the pair formed on a second side of the inner crease.

56.[[57.]] (New) The blanket of claim 55 [[56]], wherein the inner crease, the first crease of the pair of creases and the second crease of the pair of creases are generally equally spaced from one another between the adjacent modules.

57.[[58.]] (New) The blanket of claim 54 [[55]], wherein the at least one seam further includes a perforation formed along the inner crease.

58.[[59.]] (New) The blanket of claim 54 [[55]], wherein at least one of the sealed perimeter edges includes a crease formed along a juncture of the edge with an adjacent module.

59.[[60.]] (New) The blanket of claim 58 [[59]], wherein a height of the at least one sealed perimeter edge when folded along the crease is approximately equal to a height of the adjacent module.